

EXHIBIT B-1

<p>Loeb teaches (see figures) a method of producing energy from a system having a semipermeable barrier separating a pressure chamber and a solvent chamber,</p>	<p>The Applicant disagrees with this characterization of Loeb. The high pressure chamber in Loeb is not a pressure chamber as used in the claimed invention. Rather, the high osmotic pressure fluid is pumped to one side at a higher hydrostatic pressure by a pump. See Loeb col. 12, lines 23-30. The operation of Loeb is based on a constant hydrostatic pressure <math>P</math> being exerted upon the sea water solution. The work is provided by the inclusion of additional volume to the constant pressure and is given by <math>W=P\Delta V</math>, where <math>P</math> is the hydrostatic pressure provided by pump 122 and <math>\Delta V</math> is the additional volume provided by the river water passing through the semipermeable membrane. See Loeb, col. 12, lines 40-45</p>
<p>wherein the pressure chamber has a solution (sea water) and solvent chamber has a solvent (river water),</p>	<p>As discussed above, there is no pressure chamber as in the claimed invention, however one side of Loeb contains a solvent at a higher hydrostatic pressure due to a pump and one side of the chamber contains solvent solution at a lower hydrostatic pressure.</p>
<p>the solvent flows from the solvent chamber to the pressure chamber across the membrane and the solvent chamber has a reduced pressure or even vacuum.</p>	<p>The solvent will flow across the semipermeable membrane. However, Applicant disagrees with the remainder of this statement. There is no teaching in Loeb of a vacuum or reduced pressure anywhere in the PRO engine 102. See Loeb, the entire document. The figures in Loeb are described as being block diagrams, see Loeb col. 3, lines 10-63 and cannot therefore be thought of as physically representative of the system. A block diagram cannot be relied upon to show a closed system or an open system. Given that there is no mention of a vacuum or reduced or lower pressure in the low hydraulic pressure side of the PRO engine, it is not logical to assume that any vacuum is produced, or even, that the pressure is lowered. In addition, the lower hydraulic</p>

	<p>pressure side of the PRO engine is to be maintained as a low hydraulic pressure side, and if river water is continuously pumped into this side (by a pump), see Loeb, col. 12, lines 30-35, as is taught the side cannot be closed as the hydraulic pressure would increase due to the closed nature of the system. Thus it is not logical to assume that a vacuum or reduced pressure is provided for in Loeb.</p>
<p>See also figure 11, which is a closed system with the solvent chamber having only inflow, wherein the solvent chamber is at zero pressure.</p>	<p>Figure 11 is a block diagram and not a physical representation of the system. There is no teaching of a closed system in Loeb; however, due to the presence of a pump (not shown) on the input of the solvent side of the PRO engine and the fact the solvent side of the PRO engine has a low hydrodynamic pressure, it is clear that the solvent side of the PRO engine is not closed.</p>
<p>The solute solution is evaporated with external heat (like solar) in a third chamber—see Figure 6 for example and the solute solution is recycled as a concentrated solution,</p>	<p>The applicant agrees that this occurs in Loeb.</p>
<p>With respect to the limitation: “utilizing the semi-permeable barrier to restrict solute from flowing into the first chamber while allowing the solvent to flow into the second chamber as the solvent flows from the first chamber into the second chamber a void is created in the first chamber such that a vacuum develops in the first chamber and increases the pressure in the <u>diluted solute solution in the second chamber</u>,” the creation of the void and the increase in pressure in the diluted solute solution in the second chamber are inherent in the process of natural osmosis and are not patentable process steps.</p>	<p>The Applicant has pointed out above that the creation of a void and the increase in pressure does not occur in Loeb and therefore cannot be inherent in Loeb. Loeb operates on the extra volume that is provided by the river water and not an increase in pressure. See Loeb, col. 4 lines 35-44 and col. 12, line 41-49.</p>
<p>Opening the second chamber initially to add solute solution is implied in the reference in that the process in the reference would require opening and closing of valves to admit the various flows.</p>	<p>There is no teaching of opening and closing the chamber at all in Loeb so that there is no inherency at all. Loeb is a continuously operating system. The use of the turbine, see figures 9-11 and 13 and 14, implies a continuously operating system as turbines</p>

	require a continuously provided stream of fluid.
If the steps of opening and closing the second chamber are intended to be physically opening and closing the lid of a container then the claims are obvious—the reference has an automated system compared to applicant’s manual process of opening a container for pouring and/or removing the contents and then closing it. Broadly providing an automatic or mechanical means to replace a manual activity which accomplished the same result is not sufficient to distinguish over the prior art. (Citations omitted) The inverse of this case law, replacing an automated process with a manual process is also not patentable.	The Applicant is not stating that the opening and closing of valves in the claimed invention is what provides the patentability of the system.
With respect to claim 50, a displacement of an object, such as a piston, is implied in the reference to a piston in col. 11, lines 37-59.	The only mention of a piston in Loeb is to describe a limitation on equipment due to the liquid content contained in saturated steam, viz., “Because of the phase changes occurring in the vapor power cycle, it must be conducted within limits which add to the cost of necessary equipment. For example the expansion of saturated steam in a heat engine is accompanied by partial condensation to liquid water. However, this liquid content cannot exceed 10 or 12 percent because of excessive wear on turbine blades or engine pistons.” See Loeb, col. 11 , lines 46-54.